

## REMARKS

Favorable reconsideration is respectfully requested in light of the following comments. Claims 1-35 remain pending. Applicants respectfully disagree with each statement made in the instant Action, including any statements not expressly discussed herein. Claims 1-35 are pending.

### Claim Rejections – 35 USC § 103

Claims 1-2, 4, 6, 8-9, 15-27, and 34-35 have been rejected under 35 U.S.C. § 103(a) as unpatentable over Sano et al., U.S. Patent Publication No. 2003/0236321, in view of Krepski et al., U.S. Patent No. 5,929,160. The Examiner has relied upon Sano et al. to disclose an ink composition and Krepski et al. to suggest inclusion of a silyl-terminated sulfopoly(ester-urethane). Applicants disagree.

Claims 1-5, 9-16, 23-25, 27, 31 and 34-35 have been rejected under 35 U.S.C. § 103(a) as unpatentable over Zhu, U.S. Patent No. 5,889,083, in view of Krepski et al., U.S. Patent No. 5,929,160. The Examiner has relied upon Zhu to disclose an ink composition and Krepski et al. to suggest inclusion of a silyl-terminated sulfopoly(ester-urethane). Applicants disagree.

Claims 1-2, 4-9, 15-16, 23-25, 27-30 and 32-35 have been rejected under 35 U.S.C. § 103(a) as unpatentable over Erdtmann et al., U.S. Patent No. 6,533,408, in view of Krepski et al., U.S. Patent No. 5,929,160. The Examiner has relied upon Erdtmann et al. to disclose an ink composition and Krepski et al. to suggest inclusion of a silyl-terminated sulfopoly(ester-urethane). Applicants disagree.

These *prima facie* obviousness rejections are flawed since there is, at least, no motivation to combine the references and there is no reasonable expectation of success that the compounds allegedly described in Krepski et al would jet through an ink jet print head nozzle.

### **No Motivation to Combine References**

At a minimum, there is no reasonable motivation to combine these references as suggested by the Examiner. The Examiner has suggested that it would be obvious to combine these two teachings in order to reach the claimed invention. This is not correct for, at least, several reasons.

Applicants note that the Examiner has asserted that Krepski et al. should be considered as being reasonably pertinent. According to M.P.E.P. §2141.01(a), as cited by the Examiner, a reference may be relied upon if it is reasonably pertinent to the particular problem with which the inventor is concerned. This requirement has not been met in this case. The claimed invention is directed to improved ink jet inks. Krepski et al., however, are directed to an entirely different problem. In particular, and as stated several times within the reference, Krepski et al. are directed to a method of reducing water uptake in silyl terminated sulfopoly (ester-urethanes). Therefore, Applicants respectfully disagree with the Examiner's contention that Krepski et al. are reasonably pertinent.

Moreover, even if Krepski et al. are considered as describing polymers similar to the claimed silyl-terminated sulfopoly(ester-urethane), there does not appear to be any express teaching within the reference that these polymers might be suitable for use in an ink jet ink. Indeed, while Krepski et al. briefly disclose coating a variety of different materials, including paper, one of skill in the art will recognize that Krepski et al., as a whole, teaches pavement marking paint. As noted, for example, at M.P.E.P. §2141.02(VI), the Examiner is required to consider the teachings of the whole reference. It is not proper to select bits and pieces of the reference that are contrary to the teachings of the whole, as the Examiner has done in this Office Action. Thus, Krepski et al., taken as a whole, is directed to pavement marking paint and is not reasonably pertinent to ink jet inks.

It is for this reason, for example, that the compositions taught by Krepski et al. are discussed as possibly including materials such as optical elements to enhance pavement marking

visibility under low light conditions (column 16, lines 18-20), or anti-skid particles (see column 16, starting at line 47). Clearly, Krepski et al. do not describe, suggest, or motivate inclusion of a silyl-terminated sulfopoly(ester-urethane) polymer in an ink jet ink.

Sano et al., Zhu, and Erdtmann et al. do not appear to suggest inclusion of the silyl-terminated sulfopoly(ester-urethane) polymers allegedly disclosed by Krepski et al. Krepski et al. do not appear to suggest inclusion of their polymers in an ink jet ink composition. The Examiner identified no motivation within Sano et al., Zhu, or Erdtmann et al. to include the silyl-terminated sulfopoly(ester-urethane) polymer disclosed by Krepski et al. Thus, the reference provides any motivation to combine these references as suggested by the Examiner.

Applicants assert that one of ordinary skill in the art would not be motivated to combine these references as suggested by the Examiner. Thus, the *prima facie* obviousness rejection is flawed and should be withdrawn. Favorable reconsideration is respectfully requested.

#### **No Reasonable Expectation of Success**

With regard to all the rejections discussed above, there is, additionally, no reasonable expectation of success that the silyl-terminated sulfopoly(ester-urethane) material described in Krepski et al. would jet out of an ink jet head. As described in the pending background, it is desirable to provide a high solids content ink, however, attempts to prepare high solids inks have met with various problems: flocculation of the pigment, clogging of the ink jet nozzle, poor jetting characteristics, and the like.

The claimed silyl-terminated sulfopoly(ester-urethane) ink jet particles are described in the pending application as being self-cross-linking (defined as – upon exposure to ambient conditions a covalently crosslinked network forms without any applied energy or curative). One skilled in the art expects that these self-crosslinking silyl-terminated sulfopoly(ester-urethane) particles would not be useable in an ink jet printing process since it is well known that clogging

the ink jet print head nozzle occurs when high solids inks cross-link or polymerize, especially when the ink jet print head warms.

Applicants assert that there is no reasonable expectation of success that the self cross-linkable silyl-terminated sulfopoly(ester-urethane) material described in Krepski et al. would jet out of an ink jet head. as suggested by the Examiner. Thus, the *prima facie* obviousness rejection is flawed and should be withdrawn. Favorable reconsideration is respectfully requested.

### Conclusion

In view of the above, Applicant respectfully requests withdrawal of the rejections and allowance of the claims. Prompt passage to issue is earnestly solicited. Should the Examiner feel a telephone interview would be helpful in advancing this case to allowance, Applicant invites the Examiner to contact their representative at the number listed below.

Please continue to send all future correspondence for this matter to:

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Respectfully submitted,

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